

THE TRANSIT OF VENUS.  
EXPERIENCES OF THE OBSERVING  
PARTIES IN NEW-ZEALAND.  
BLUFF HARBOR AND QUEENSTOWN—DR.  
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HAM ISLAND PARTY—THE WORK OF  
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*From Our Special Correspondent.*

DUNEDIN, New-Zealand, }  
Wednesday, Jan. 13, 1875. }

In my last letter I gave a pretty complete account of the doings of the Hobart Town party. In the present one I shall give a brief history of the landing of the New-Zealand and Chatham Island parties, together with a short description of their stations, and some account of their observations. It will not be necessary to describe either their instruments or their observatories, because these are precisely the same as those used by Prof. Harkness at Hobart Town.

On Oct. 9 the Swatara left Hobart Town for Bluff Harbor, New-Zealand, where she arrived on the morning of Oct. 16, having made the passage under sail. On the night of the 14th, two days before she got in, she encountered a severe gale off the Solanders, but, being an excellent sea boat, she rode it out bravely, scarcely taking a drop of water on board.

DR. PETERS AND HIS PARTY AT QUEENSTOWN.  
At the Bluff Lieut. E. W. Bass, United States Engineers, Assistant Astronomer to the New-Zealand party, reported to Dr. Peters. According to previous arrangement, he had come from the United States by mail steamer, and having been in the island about a month he had spent the time in examining different localities in order to determine which was best suited for an astronomical station. In this he was greatly assisted by the local knowledge of Mr. McKerrow, Surveyor General of the island, who was directed by the New-Zealand Government to accompany him for the purpose of pointing out the most promising sites. After reconnoitering nearly the whole province of Otago, Lieut. Bass recommended Queenstown as being freer from clouds than any other part of the country, and there Dr. Peters decided to locate his party.

Queenstown, a village of 700 inhabitants, is situated in the interior of the island, upon the banks of Lake Wakatipu, about 120 miles from Bluff Harbor. It is everywhere surrounded by high mountains, which condense the moisture coming from the sea, and to this circumstance it owes its comparative freedom from clouds. In natural beauty the locality is scarcely inferior to the far-famed lake districts of Switzerland. To reach it from the Bluff there is, first, forty miles of railroad, then sixty miles of staging, and finally, twenty miles of steam-boating on Lake Wakatipu.

THE CHATHAM ISLAND PARTY LANDED.  
The outfit of the party was soon landed, and on the afternoon of Oct. 17 the Swatara left Bluff Harbor for Port Chalmers, where she hoped to get a pilot for Chatham Island. In this, however, she was disappointed, and after a stay of half an hour off the bar of Otago Harbor, she went on her way to Chatham. The weather was propitious, and on the afternoon of Oct. 19 the island was reached, and the ship hove to off the little hamlet of Waitangi for a pilot; but finding none, she went eleven further to the north-west, and at 5:30 P. M. anchored in Wangaroa Bay, sometimes called Port Hutt, which is as snug a little harbor as could be desired, and the only thoroughly safe anchorage in the island. Outside the sea was heavy and the wind fresh from the north-west, but the harbor was smooth as a mill-pond, and in an hour's time a half dozen of the neighboring farmers were on board exchanging congratulations with the officers and inviting them to their hospitable roofs. The next day, after a thorough examination of the locality, Mr. Smith, chief of the party, closed a circle for the observing station on the western side of the harbor, on the shores of a little indentation called Howard Bay. The outfit of the party, amounting to about 150 tons of gross weight, was landed without delay, and a little village sprung up as if by magic. The tents, ten in number, were pitched near the beach, and the transit house was set up on a low hill some 400 yards further inland. At the same time the erection of the photographic and equatorial houses was commenced, and so rapidly was everything pushed forward that in three days the transit instrument was ready for work, and a set of time observations were made. Meanwhile, the officers of the ship had visited many of the settlers, and in return had entertained them on board.

Early in the morning of Oct. 26, after a week's stay at Chatham, the Swatara hove up her anchor and once more turned her head seaward. The grand object of her mission was successfully accomplished. Within five months she had sailed nearly 20,000 miles, had not been at anchor more than twelve days at a time, and had landed safer every one of the five parties which she took on board at New-York! When we remember that all the other nations of the world sent a ship with each of their parties, and severely criticised the United States for not doing the same thing, surely Capt. Chandler and his officers have reason to be proud of their achievement!

PORT CHALMERS AND DUNEDIN.  
At 7:15 P. M., Oct. 23, we came to anchor in Port Chalmers, having made the passage from Chatham Island in two days and a half. Perhaps some of my readers are inclined to say that from the morning of the 26th to the evening of the 27th is three days and a half, and so it would be ordinarily, but not in the present case. The 180th meridian passes between Chatham Island and New-Zealand, and whenever a ship crosses that she either gains or loses a day. We were going to the westward, and consequently lost a day. We had no 27th. Soon after anchoring we were visited by many gentlemen from Dunedin, who proffered to us the same kind welcome, and the same generous hospitality which has been so freely extended wherever we have gone.

Dunedin, the metropolis of New-Zealand, having about 22,000 inhabitants, is situated on Otago Harbor, six miles above Port Chalmers, with which it is connected by a railroad of three feet six inches gauge. The neighboring country is exceedingly picturesque, and the lofty hills which abound on every side compel the railroad to follow all the sinuosities of the shore, so that although the distance between the two towns is less than six miles in a straight line, yet the track is about ten miles long. Stops are made at five intermediate stations. Six trains per day are run in each direction, and the through time is thirty-five minutes. Like our own Western cities, Dunedin has sprung up suddenly. On March 23, 1848, Capt. William Cargill landed on its site with the first party of emigrants, and although he died on Aug. 6, 1860, he yet lived long enough to see a flourishing town supplant the primeval wilderness, and to be the first superintendent of the province. In the very heart of the city, at the intersection of Prince's, High, and Rattray streets, the corporation have erected a strikingly beautiful monument to his memory. The general appearance of Dunedin is similar to that of the larger towns of Western New-York, and the continual bustle and activity in the streets shows that there is no lack of business. In fact, it is questionable

if the enterprise of the colonists does not sometimes outrun their prudence, for New-Zealand has already contracted a public debt of \$85,000,000. To be sure, it has all been expended for railroads, telegraphs, and other internal improvements, but still it seems a heavy burden for such a young country. At Dunedin we met a number of Americans, some of whom were residents of the place, but the majority were wool-buyers who had come over from the United States to make their annual purchases of that staple, which, by the way, is one of the principal products of the colony.

After filling up our coal-bunkers and exchanging chronometer signals by telegraph with Dr. Peters, the Swatara left Dunedin about noon of Nov. 4. In twenty-five hours she reached Bluff Harbor, where she remained until late in the afternoon of Nov. 7, when she sailed for Hobart Town. After a rather rough passage she arrived at that city Nov. 13 at 1:30 P. M., and dropped her anchor on the bottom, there to rest until after the transit was over.

THE STATE PRISON OF TASMANIA.  
Port Arthur, fifty-two miles from Hobart Town, is the State Prison of Tasmania. It was originally established by the English Government as a convict depot during the time when Van Diemen's Land was a penal settlement, and being intended for the reception of the worst class of criminals, no pains were spared to prevent their escape. The buildings, which are of the most substantial character, consist of a penitentiary, a separate or model prison, a lunatic asylum, and some small workshops, together with quarters for the civil superintendent and keepers, and barracks for the accommodation of the battalion of soldiers who were always stationed there. The whole establishment is situated on a peninsula, joined to the main land by a narrow neck, which is constantly patrolled by policemen and guarded by a line of ferocious dogs, chained to stakes so arranged that no person can pass without coming within their reach. Only those connected with the prison were allowed to reside within its limits. There are ample accommodations for 1,000 prisoners, but as England has long ceased to send her law-breakers to Tasmania, and very little crime is committed in the colony, the glory of the place has departed. The soldiers are all gone, and the keepers have now only 120 prisoners under their charge, among whom there still remain some who were transported from the mother country.

COURTESIES TO COLONIAL OFFICIALS.  
Once a year this place is visited by a committee of the Ministry, who come to hear the complaints of the prisoners, and, in cases of specially good conduct, to remit a part of their sentences. The committee always make the passage from Hobart Town in the Government schooner. If the wind is favorable they reach their destination in a few hours; but if not, they are sometimes two or three days on the way, which, in so small a vessel, is exceedingly uncomfortable. Hearing that they were about to make their annual trip, and wishing to show his appreciation of the kindness we had experienced at the hands of the government, Capt. Chandler offered to take them down in the Swatara. His offer was gladly accepted, and with the Colonial Secretary, the Minister of Lands and Works, the Attorney General, the United States Consul, and some other gentlemen on board, we left Hobart Town on Dec. 16, at 12:30 P. M. The passage down was very pleasant, and the scenery everywhere beautiful, but by far the finest point was Cape Raoul, a headland nine hundred feet high, composed of basalt columns which I could almost fancy were huge organ pipes pealing forth the music of the deep. We reached Port Arthur at 5:20 P. M., and during our stay there were entertained by the Ministerial Committee, and shown everything connected with the institution. On Dec. 18, at 4:30 A. M., we sailed again, and in four and a half hours reached Hobart Town and landed the party. This little act of courtesy called forth from the colonial newspapers the warmest encomiums, both on Capt. Chandler and on the American Navy.

A SUCCESSFUL SEARCH FOR THE GERMAN OBSERVING PARTY.

We remained in Hobart Town only long enough to get a few fresh provisions, and sailed for the Auckland Islands at 3:20 in the afternoon. Our object in going there was to hunt up the German Transit of Venus party, about whom there was considerable anxiety. They had left Melbourne in the beginning of October in the French bark Alexandrine, which they had chartered for their own use, and since then nothing had been heard of them, although it was understood that the ship was to make one or two trips between the Aucklands and New-Zealand, for the purpose of determining their difference of longitude. The German Consul at Melbourne felt so anxious about the party that he telegraphed to Berlin for instructions concerning them, and also wrote to Capt. Chandler on the subject. The result of the correspondence was that we sailed for the Aucklands as above narrated. Our passage was on the whole a pleasant one, and on Dec. 23 we reached the islands and anchored in Port Ross, off Terror Cove, at 1:15 P. M. There we found the missing party, of which Dr. Hugo Seeliger is chief, their station in the best of order, and everybody in excellent health and spirits. They had met with no accident whatever, but the landing of their outfit and the erection of their buildings had occupied more time than was expected, and thus the bark had been delayed in starting for New-Zealand. They were very much surprised that any anxiety should have been felt on their account, but at the same time they were glad to see us, and gave us a most hearty reception. They had found the weather at their station exceedingly bad, averaging about one clear night in two weeks, but they had been fortunate in getting observations of the transit. It was cloudy when the first contact took place, but half an hour afterward it cleared up and remained so till thirty minutes after the transit was over. They secured one hundred and fifteen photographs, six sets of measures with the heliometer, and observations of the third and fourth contacts.

PORT ROSS.  
The appearance of the country about Port Ross is certainly not inviting. The land consists of low hills, and the soil, which is everywhere wet and soggy, is generally covered with coarse herbage, but in many places there is a heavy growth of stunted trees, all of which are bent toward the south-west by the prevailing wind. The island has recently been rented by the Government of New-Zealand to a gentleman who proposes to use it as a sheep run, but I doubt if it will be profitable for that purpose, because even the wild goats become sore-footed from the excessive moisture. Wild hogs, rabbits, snipe, ducks, and other water fowl abound. There are also a few seals to be seen on the rocks.

DR. PETERS' PARTIAL SUCCESS.  
We were delayed in Port Ross a couple of days by bad weather, and during our stay the Alexandrine returned from Bluff Harbor, whither she had gone ten days before to make chronometer comparisons for longitude purposes. On the afternoon of Christmas Day the wind became favorable, and at 7:30 P. M. we sailed for Port Chalmers, New-Zealand, where we arrived on the afternoon of Dec. 27. That same evening we compared chronometers by telegraph with Dr. Peters, at Queenstown, and learned that he had a clear sky during most of the transit, and had obtained 237 photographs, together with some other observations. In this he was peculiarly fortunate, for none of the other parties in New-Zealand got any observations at all; they all had a cloudy sky.

THE FRENCH OBSERVERS.  
On the morning of Dec. 30, while we were lying in Port Chalmers, the French naval transport Viré came in, having on board the French Transit of Venus party from Campbell Island, of which M. Boquet De La Groye is chief. I regret to say that they were disappointed in

getting observations. At their station it was clear on the day before and on the day after the transit, but cloudy during the whole of the transit.

We left Port Chalmers late in the afternoon of Dec. 30, and spent New Year's Day at sea. Of course the usual calls could not be omitted, and many of the officers held burlesque receptions in their own rooms. The refreshments which they offered their visitors were really wonderful, especially the drinkables. One enterprising gentleman included in his list such choice decoctions as Arnold's writing fluid, red ink, muriatic acid, and oil of vitriol, any one of which was strong enough to kill at forty rods. However, he did not disguise the character of his beverages. On the contrary, he asked all comers "what poison they would take," and, so far as I know, they, one and all, declined anything stronger than champagne or sherry.

We crossed the 180th meridian on the 2d of January, and thus had two New Years' Days, which gives rise to some interesting questions as to whether or not we lost a year; but this letter is already so long that I cannot discuss that point, but must leave it to the sagacity of the reader.

We reached Chatham Island early on the morning of Jan. 3, 1875, and found Mr. Smith and his party all well. They had had a cloudy sky during most of the transit, and had only been able to secure thirteen photographs and a number of micrometrical measures.

I will give further details respecting Chatham Island and its inhabitants in a future letter.